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EXAMINER	
ZERVIGON, RUDY	
ART UNIT	**PAPER NUMBER**
1792	

NOTIFICATION DATE	DELIVERY MODE
12/13/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/809,436	FINK, STEVEN T.	
	Examiner	Art Unit	
	Rudy Zervigon	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-6 and 9-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-6 and 9-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 February 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 26, 2007 has been entered.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 2-9, and 16-18 are rejected under 35 U.S.C. 102(b) as being anricipated by Moslehi; Mehrdad M. et al. (US 6073576 A). Moslehi teaches a temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) for shielding a substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) in a semiconductor processing system (Figure 6), the temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) comprising: a cap (398; Figure 10; 62; Figure 2; column 14, line 63; column 7, lines 48-63) having a coolant passage (400; Figure 10; column 14, line 54 - column 15, line 4) therein; a plenum adaptor (370; Figure 10; column 14, line 60) coupled to the cap (398; Figure 10; 62; Figure 2; column 14, line 63; column 7, lines 48-63) and configured to connect to a coolant system (372; Figure 10; column 14, line 55) for circulating coolant to the coolant passage (400; Figure 10; column 14, line 54 - column 15, line 4), the plenum adaptor

(370; Figure 10; column 14, line 60) having a plenum adapter ring (piece immediately below 370, atop 380; Figure 10) configured to be supported by a substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4), wherein the plenum adaptor (370; Figure 10; column 14, line 60) does not include any fastening mechanism[1] (none shown directly associated with 370) for maintaining a position of the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) on the temperature controlled substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4), as claimed by claim 9

Moslehi further teaches:

i. The temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) according to claim 9, wherein the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) comprises: a cap (398; Figure 10; 62; Figure 2; column 14, line 63; column 7, lines 48-63); and a heat conducting element (386; Figure 10; column 14, line 54 - column 15, line 4) connected between the cap (398; Figure 10; 62; Figure 2; column 14, line 63; column 7, lines 48-63) and a location where a substrate would rest during processing, the heat conducting element (386; Figure 10; column 14, line 54 - column 15, line 4) configured to transfer heat from the substrate to the cap (398; Figure 10; 62; Figure 2; column 14, line 63; column 7, lines 48-63), as claimed by claim 2

ii. The temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) according to claim 2, wherein the cap (398; Figure 10; 62; Figure 2;

[1] Such as nuts & bolts and/or screws.

column 14, line 63; column 7, lines 48-63) comprises a ceramic material ("aluminum oxide"; column 7, lines 48-63), as claimed by claim 3

iii. The temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) according to claim 2, wherein the cap (398; Figure 10; 62; Figure 2; column 14, line 63; column 7, lines 48-63) comprises anodized aluminum ("aluminum oxide"; column 7, lines 48-63), as claimed by claim 4

iv. The temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) according to claim 9, wherein the coolant comprises a dielectric fluid, as claimed by claim 5. Applicant's claim requirement of "wherein the coolant comprises a dielectric fluid" is a claim requirement of intended use in thepending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

v. The temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) according to claim 9, further comprising an insulator (bolted piece surrounding 398; Figure 10) housed between the shield ring (398+370+400; Figure 10;

column 14, line 54 - column 15, line 4) and the substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4), as claimed by claim 6

vi. The temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) according to claim 9, further comprising an *adapter* (connections, not shown, for 372; Figure 10; column 14, line 55) for connecting to a cooling system (372; Figure 10; column 14, line 55) of the substrate to provide coolant exchange between the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) and the substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4), as claimed by claim 7

vii. The temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) according to claim 9, wherein the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) is configured to attach to the substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) without the use of fasteners, as claimed by claim 8.

viii. The temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) of claim 9, further comprising an insulating member ("L" piece adjacent to 370; Figure 10) adjacent to the first segment (386/398 interface) and configured to thermally insulate the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) from a substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) when the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) is coupled to a substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4), as claimed by claim 16

ix. A substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) assembly comprising: a temperature-controlled substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) having a first surface (356; Figure 10; column 14, line 55) configured to support a semiconductor substrate, and a second surface (accomodating 388; Figure 10; column 14, lines 55-65) surrounding a perimeter of the first surface (356; Figure 10; column 14, line 55) and configured to support a shield ring (388; Figure 10; column 14, line 54 - column 15, line 4); and a temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) coupled to said second surface (accomodating 388; Figure 10; column 14, lines 55-65) and having at least one coolant passage (400; Figure 10; column 14, line 54 - column 15, line 4) provided within the temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4), wherein the temperature controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) rests on the second surface (top surface of 380) of the temperature controlled substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) without any fastening mechanism (1 above - none shown directly associated with 370) maintaining a position of the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) on the temperature controlled substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4), as claimed by claim 17

x. The substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) assembly of claim 17, wherein the temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) comprises a cap (398; Figure 10; 62; Figure 2; column 14, line 63; column 7, lines 48-63) having the at least one coolant passage (400;

Figure 10; column 14, line 54 - column 15, line 4) therein, and a plenum adapter (piece immediately below 370, atop 380; Figure 10) coupled to the cap (398; Figure 10; 62; Figure 2; column 14, line 63; column 7, lines 48-63) and configured to connect to a coolant system (372; Figure 10; column 14, line 55) for circulating coolant to the coolant passage (400; Figure 10; column 14, line 54 - column 15, line 4), as claimed by claim 18

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 10-13, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moslehi; Mehrdad M. et al. (US 6073576 A) in view of Nagaiwa, Toshifumi et al. (US 20020029745 A1). Moslehi is discussed above. Moslehi does not teach:

i. The temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) of claim 9, wherein the cap (398; Figure 10; 62; Figure 2; column 14, line 63; column 7, lines 48-63) is coupled to the plenum adapter (connections, not shown, for 372; Figure 10; column 14, line 55) by at least one annular nut, as claimed by claim 10

ii. The temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) of claim 9, further comprising at least one seal interposed between the cap (398; Figure 10; 62; Figure 2; column 14, line 63; column 7, lines 48-63) and the plenum adapter (connections, not shown, for 372; Figure 10; column 14, line 55), said seal being configured to impede an escape of said coolant from the coolant passage (400; Figure 10; column 14, line 54 - column 15, line 4), as claimed by claim 11

iii. The temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) of claim 11 wherein said at least one seal comprises both a vacuum seal and a dielectric seal, as claimed by claim 12

iv. The temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) of claim 12, further comprising a leak check port positioned between said vacuum seal and said dielectric seal, as claimed by claim 13

v. The substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) assembly of claim 18, further comprising a focus ring coupled to said substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) and interposed between a perimeter of said substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) and said shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4); and a heat conducting element (386; Figure 10; column 14, line 54 - column 15, line 4) comprising a first segment (386/398 interface) extending along and in contact with said cap (398; Figure 10; 62; Figure 2; column 14, line 63; column 7, lines 48-63) and a second segment extending substantially perpendicular from the first segment (386/398 interface) and contacting said focus ring and said substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4), wherein the heat conducting element (386; Figure 10; column 14, line 54 - column 15, line 4) provides a heat conduction path from said substrate, through said focus ring, to the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4), as claimed by claim 19

vi. The temperature controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) of Claim 9, wherein the shield ring (398+370+400; Figure 10; column

14, line 54 - column 15, line 4) has a vertical dimension such that a top surface (388; Figure 10) of the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) is substantially coplanar with a substrate support surface (top surface) of the substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) when the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) is supported by the substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4), as claimed by claim 20

vii. The substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) assembly of Claim 17, wherein a top surface (388; Figure 10) of the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) is substantially coplanar with said first surface (top surface) of the substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4) when the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) is supported by the substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4), as claimed by claim 21

Nagaiwa teaches a wafer processing system (Figure 1) including:

i. Nagaiwa's temperature-controlled shield ring (50; Figure 8) of claim 9, wherein Nagaiwa's cap (55; Figure 8) is coupled to Nagaiwa's plenum adapter (51; Figure 8) by at least one annular nut (accomodating 56a; Figure 8), as claimed by claim 10

ii. Nagaiwa's temperature-controlled shield ring (50; Figure 8) of claim 9, further comprising at least one seal (51E; Figure 8) interposed between Nagaiwa's cap (55; Figure 8) and Nagaiwa's plenum adapter (51; Figure 8), Nagaiwa's seal (51E; Figure 8)

being configured to impede and escape of Nagaiwa's coolant from Nagaiwa's coolant passage (51D; Figure 8), as claimed by claim 11

iii. Nagaiwa's temperature-controlled shield ring (50; Figure 8) of claim 11 wherein Nagaiwa's at least one seal (51E; Figure 8) comprises a dielectric seal (51E; Figure 8) – claim 12

iv. Nagaiwa's substrate holder (51; Figure 8) assembly of claim 18, further comprising a focus ring (52; Figure 8; [0090]) coupled to Nagaiwa's substrate holder (51; Figure 8) and interposed between a perimeter of Nagaiwa's substrate holder (51; Figure 8) and said shield ring (50; Figure 8); and a heat conducting element (64; Figure 8) comprising a first segment (segment of 64 below top of 55; Figure 8) extending along and in contact with Nagaiwa's cap (55; Figure 8) and a second segment (segment of 64 above top of 55; Figure 8) extending substantially perpendicular from Nagaiwa's first segment (segment of 64 below top of 55; Figure 8) and contacting Nagaiwa's focus ring (52; Figure 8; [0090]) and Nagaiwa's substrate holder (51; Figure 8), wherein Nagaiwa's heat conducting element (64; Figure 8) provides a heat conduction path from Nagaiwa's substrate, through Nagaiwa's focus ring (52; Figure 8; [0090]), to Nagaiwa's shield ring (50; Figure 8), as claimed by claim 19

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Nagaiwa's temperature-controlled shield ring (50; Figure 8) elements and add an additional fluid port used as a leak check port. Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the dimension(s) of Moslehi's apparatus.

Motivation to add Nagaiwa's temperature-controlled shield ring (50; Figure 8) elements and add an additional fluid port used as a leak check port is for attenuating temperature increases near the edge of wafers thus influencing the yield of the processed devices ([0008]). It is well established that the duplication of parts is obvious (In re Harza , 274 F.2d 669, 124 USPQ 378 (CCPA 1960) MPEP 2144.04).

Further, it is well established that changes in apparatus dimensions are within the level of ordinary skill in the art.(Gardner v. TEC Systems, Inc. , 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied , 469 U.S. 830, 225 USPQ 232 (1984); In re Rose , 220 F.2d 459, 105 USPQ 237 (CCPA 1955); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); See MPEP 2144.04). Motivation to optimize Moslehi's shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) and/or is for providing greater surface area for heat transfer as inferred from Moslehi's heat transfer means (400; Figure 10; column 14, line 54 - column 15, line 4).

6. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moslehi; Mehrdad M. et al. (US 6073576 A) and Nagaiwa, Toshifumi et al. (US 20020029745 A1) in view of Sago; Yasumi et al. (US 7025855 B2). Moslehi and Nagaiwa are discussed above.

Nagaiwa further teaches:

i. Nagaiwa's temperature-controlled shield ring (50; Figure 8) of claim 9, further comprising a heat conducting element (64; Figure 8) comprising: a first segment (segment of 64 below top of 55; Figure 8) extending along and in contact with Nagaiwa's cap (55; Figure 8), and a second segment (segment of 64 above top of 55; Figure 8)

extending substantially perpendicular to Nagaiwa's first segment (segment of 64 below top of 55; Figure 8) - claim 14

Moslehi and Nagaiwa do not teach:

i. the second segment (segment of 64 above top of 55; Figure 8) being configured to contact a focus ring (52; Figure 8; [0090]) surface and a substrate holder (51; Figure 8) surface when Nagaiwa's shield ring (50; Figure 8) is coupled to a substrate holder (51; Figure 8) assembly – claim 14

ii. Nagaiwa's temperature-controlled shield ring (50; Figure 8) of claim 14, wherein Nagaiwa's second segment (segment of 64 above top of 55; Figure 8) includes a protrusion (sloped portion) extending substantially perpendicular from Nagaiwa's second segment (segment of 64 above top of 55; Figure 8) so as to provide a discrete surface for contacting Nagaiwa's substrate holder (51; Figure 8) surface, as claimed by claim 15

Sago teaches

ii. A second segment (25/26 interface + 282/26 interface) being configured to contact a focus ring (25; Figure 1) surface and a substrate holder (282; Figure 1) surface when Sago's shield ring (50; Figure 8) is coupled to a substrate holder (282; Figure 1) assembly – claim 14

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the relative dimension(s) of Moslehi and Nagaiwa's apparatus parts.

Motivation to optimize the relative dimension(s) of Moslehi and Nagaiwa's apparatus parts is to accommodate substrates of varying dimensions.

Response to Arguments

7. Applicant's arguments filed September 26, 2007 have been fully considered but they are not persuasive.

8. Applicant states:

"

With regard to the objection to the drawings, Applicant has now amended Fig. 2 to show the claimed features of the heat conducting element. Further, Applicants have amended the claims such that all claimed features are recited in terms consistent with the specification's description of these features in the drawings. Therefore, the objection to the drawings is believed to be overcome.

"

In response, the Examiner's has removed his objections and associated rejections in view of the amendment to the specification now supporting the claimed structure.

9. With respect to the amendments to indepedant claims 9 and 17, the Examiner refers Applicant to the Examiner's new grounds of rejection above. The Examiner notes that Moslehi's plenum adaptor (370; Figure 10; column 14, line 60) is shown absent any additonal element that can remotely be construed as the claimed "fastening means". The only fastening means shown by Moslehi is to the far left in Figure 10 where a presumed bolt is not numbered. Element 408 is not a fastening means and is described by Moslehi as an "inlet conduit".

10. Applicant further states:

"

In contrast, the cited reference to Moslehi et al. discloses a substrate clamping device for mechanically holding a substrate during processing. As seen in Fig. 10 of Moslehi et al., a peripheral edge of the substrate 352 is contacted by the mechanical clamp 386 to form a "first seal" 388 that holds the substrate in place. A support ring 398 is provided radially outward of the first seal in order to support the mechanical clamp in its holding position. A pair of O-rings 392 create a "second seal" between the support ring 398 and the mechanical clamp 386. Further, the support ring 398 includes a coolant passage therein, which cools the O-rings to prevent failure by overheating.

"

In response, the Examiner notes that Applicant's *claimed* invention is not comensurate with the above statements. Specifically, Applicant claims "wherein the *plenum adaptor* (370; Figure 10; column 14, line 60) does not include any fastening mechanism[2] (none shown directly associated with 370) for maintaining a position of the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) on the temperature controlled substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4),". As a result, none of the above cited elements of Moslehi are particularly pertinent to the specifically claimed plenum adapter. Moslehi's mechaical clamp 386 does not interface in any way with his *plenum adaptor* (370; Figure 10; column 14, line 60) in a way such that it includes a "fastening mechanism[3] (none shown directly associated with 370) for maintaining a position of the shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) on the temperature controlled substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4)".

[2] Such as nuts & bolts and/or screws.

11. Applicant further states:

"

However, the support ring 398 is not a shield ring. As discussed in the September 20th interview, the mechanical clamp 386 is provided above the supporting ring 398, and thus there is no shielding function provided by the supporting ring. Indeed, Moslehi et al. does not disclose a shield ring as this term is used in Applicants' specification and understood by one of skill in the art.

"

In response, the Examiner notes that Applicant's shield ring 62, Figure 2 indeed shields Applicant's substrate holder (30; Figure 2) in the same manner and relative extent that Moslehi's temperature-controlled shield ring (398+370+400; Figure 10; column 14, line 54 - column 15, line 4) shields Moslehi's substrate holder (380; Figure 10; column 14, line 54 - column 15, line 4). When the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent (In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977); MPEP 2112.01).

12. Applicant states:

"

The Office Action takes the position that the lack of fasteners is an "intended use" of the shield ring. However, Applicants have amended Claims 9 to recite this negative limitation as a structural feature of the claimed temperature controlled shield ring. Further, while the lack of fasteners was previously only claimed as part of the shield ring, this feature is now recited in

---

[3] Such as nuts & bolts and/or screws.

Claim 17 in the context of the substrate assembly. Finally, as noted above, the absence of fasteners provides a substantial benefit in that the temperature controlled shield ring can be provided on existing substrate holders without expensive and complex retrofitting to include fastening devices for the substrate holder. The prior art devices cannot provide this advantage.

"

In response, the Examiner agrees, and has thus removed said interpritation from the body of the rejection. See above.

13. Applicant further states:

"

Moreover, as pointed out by Examiner Zervingon during the personal interview, it would not be obvious to provide the coplanar relationship between the substrate support surface and the top surface of the ring 398 of Moslehi et al. because doing so would expose the O-rings to the processing environment. This would render the support ring 398 and O-rings unfit for their intended purpose. As noted above, the secondary reference to Nagaiwa et al. does not disclose a shield ring at all, and therefore also does not disclose the substantially coplanar feature.

"

In response, the Examiner does not convey the attorney's above position that "it would not be obvious to provide the coplanar relationship between the substrate support surface and the top surface of the ring 398 of Moslehi et al. because doing so would expose the O-rings to the processing environment". The Examiner did state that focus rings and mechanical clamps are usually distinguished in the art. However, because the Examiner has demonstrated that the prior

art structure and that of the claimed invention are structurally similar, claimed functions such as "shielding" is believed to be an inherent feature of the prior art structure.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (571) 272-1442. The examiner can normally be reached on a Monday through Thursday schedule from 8am through 7pm. The official fax phone number for the 1792 art unit is (571) 273-8300. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Chemical and Materials Engineering art unit receptionist at (571) 272-1700. If the examiner can not be reached please contact the examiner's supervisor, Parviz Hassanzadeh, at (571) 272-1435.

12/6/07